

**PP-037** Frequency and related factors of nosocomial infections in ICU of tertiary hospital in Tehran, Iran, according to NNIS

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**Backgrounds:** Nosocomial infections (NIs) are one of the problems of past and recent centuries, cause of the urge of cost and expenditure to patients and health systems. Therefore identification of their incidence, related factors and prevention ways is especially important.

**Materials and Methods:** This study was performed on 691 patients who were admitted to Intensive Care Unit (ICU) of *Shaheed Mustafa-Khomeini* hospital from 1385–1386. The collection of data was done to according of questionnaire of the national nosocomial infection surveillance system (NNIS). The clinical signs and symptoms of patients were frequently controlled. In suspected patients, necessary laboratory tests and cultures was done. Data was analyzed by SPSS version 15 software.

**Results:** The incidence of NIs was 10.85 percent. The most common type of infections was pneumonia (77.3%), UTI (18.3%), surgical site infection (2.7%) and blood infection (1.3%). The most common microorganisms in pulmonary infections were *Acinetobacter SPP*, in UTI *E. coli*, in surgical site *Staphylococcus aureus* and *Klebsiella SPP*, in blood infection *Enterococci SPP*, respectively. Incidence of pneumonia significantly is more than of other ( $p=0.01$ ). The correlation of ICU stay time and incidence of NIs is significant ( $p=0.001$ ). The effect of age, gender and invasive procedures were not significant.

**Discussion:** According to results of investigation, increasing of ICU stay time has direct relation with risk of infections. Infection control practices and sanitary methods are rational and essential part in the ICU. We suggest to use of invasive procedures limited to necessary times and use of aseptic method in treatment process.

**PP-038** Detection rate and drug resistance of ESBLs-producing *Escherichia coli* in a hospital

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**Objective:** To investigation the detection rate and drug resistance of extended-spectrum $\beta$ -lactamases (ESBLs) in *Escherichia coli* and to guide the reasonable use of antibiotics.

**Methods:** The conventional methods were employed for the cultivation, isolation and detection of bacteria, and API microorganism accredit system was used for the semi-automatic identification. Kirby-Bauer (K-B) method was used for the antimicrobial susceptibility test in accordance with the standard issued by Clinical and Laboratory Standards Institute (CLSI).

**Results:** 668 *Escherichia coli* strains were isolated in specimens collected from the patients in last three years in a hospital, and the prevalence of ESBLs was 53.6%. The annual detection rate of ESBLs was 51.2%, 56.8%, 62.4% respectively. Tests in vitro showed that imipenem, meropenem, amikacin, piperacillin/tazobactam, cefoperazone/sulbactam, ceftazidime, and ceftazidime were effective to *E. coli* producing ESBLs. The drug resistance rate in *E. coli* producing ESBLs was higher than that in *E. coli* non-producing ESBL.

**Conclusion:** The detection rate and the drug resistance of ESBLs-producing *Escherichia coli* show an upward tendency in the hospital during last three years. The severe infected

patients caused by ESBLs-producing *Escherichia coli* should be preferentially used carbapenems for treatment.

**PP-039** Antibiotic susceptibility and extended spectrum beta-lactamases in urinary isolates of Enterobacteriaceae in Mashhad, Iran

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**Background:** Antibiotic resistance among Enterobacteriaceae isolated from urinary tract infections is increasing. A part of this resistance is from production of extended spectrum beta-lactamases (ESBLs), making urinary tract infection difficult to treat. In this study, prevalence of ESBL-producing Enterobacteriaceae strains and their antibiotic susceptibility patterns were determined.

**Methods:** One-hundred clinical isolates of Enterobacteriaceae (76 *Escherichia coli*, 16 *Klebsiella pneumoniae*, five *Enterobacter* sp., two *Proteus* sp. and one *Citrobacter* sp.) were collected from urine samples of inpatient and outpatient in 17-Shahrivar and Ghaem Hospitals in Mashhad. Antibacterial susceptibility test was performed by disc diffusion method. ESBL producers were detected by double disc approximation test and CLSI (Clinical Laboratory Standards Institute) confirmatory test.

**Results:** ESBL production was found to be 29% (19 *E. coli*, eight *K. pneumoniae*, two *Proteus*) of isolates. A high rate of associated resistance to co-trimoxazole, nalidixic acid, and gentamicin was found in ESBL producers ( $p<0.05$ ). All isolates were susceptible to imipenem and amikacin.

**Conclusion:** According to the results, ESBL-producing Enterobacteriaceae in the studied population is higher compared to the developed country. Considering the association of ESBL-producers with resistance to some non-beta-lactam antibiotics, amikacin and imipenem are revealed to be an appropriate drug for treating such patients.

**PP-040** Clinical case of botulism

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**Study objectives:** The early diagnosis of botulism disease, as a rare infectious disease with high mortality.

**Background:** Botulism is a rare form, but fatal, of food poisoning caused by a powerful toxin produced by *C. botulinum*. This toxin binds to receptors on peripheral nerves. The toxin prevents nerve impulses, causing flaccid paralysis which may be fatal. After consuming contaminated food, symptoms of botulism usually appear within 1–2 days but sometimes this phase can last up to one week. Initially affects senses of sight and swallowing, then it is followed by muscle paralysis which firstly is localized at scalp region. If respiratory muscles are affected it may cause death. After muscle paralysis, the ability of swallowing is hindered, while the paralysis of the head muscles gives the characteristic syndrome of "floppy baby symptoms". Impaired respiratory muscles, hinders breathing and cause death.

**Presentation case:** The patient A.N 26 years old, presented at the infective disease clinic in a stuporous state 9–10 points G-C-S, doesn't communicate but is able to gesticulate, it has palpebral ptosis and profuse vomiting. Objective examination: the patient is pale, photoreaction. TA 40/0, aphonia, dyspnea with paroxysmic crisis of breathing. After the consultation was concluded for a poisoning from an unknown poison, the other patient became grave with dyspnea and profuse vomiting. The contact kept with the Toxicology Clinic showed that we